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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/655,906	09/05/2003	Richard A. Kobylinski	8285/635	7682

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EXAMINER
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LAM, DUNG LE

ART UNIT	PAPER NUMBER
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2687

DATE MAILED: 06/29/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/655,906

Applicant(s)

KOBYLINSKI ET AL.

Examiner

Dung Lam

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 05 September 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 9/5/03 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Double Patenting*

1. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

2. Claims 1-7 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over the corresponding claims 1 and 2 of U.S. Patent No. 6044572. Although the conflicting claims are not identical, they are not patentably distinct from each other because the pending claims are broader than the patented claims, thus the pending claims encompass all the limitations of the previously claimed limitations.

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3. Claims 8-15 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over the corresponding claim 3 of U.S. Patent No. 6044572. Although the conflicting claims are not identical, they are not patentably distinct from each other because the pending claims are broader than the patented claims, thus encompass all the limitations previously claimed

***Information Disclosure Statement***

4. The references listed in the Information Disclosure Statement filed on 9/5/2003 has been considered by the examiner (see attached PTO-1449 form or PTO/SB/08A and 08B forms.)

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claim 1, and 3-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Wallstedt et al** (US Patent No. 5722073) in view of **Haartsen** (US Patent No. 5778075).

7. Regarding claim 1, **Wallstedt** teaches a method for mobile assisted handoff of a communication link between a mobile station and a base station in a digital cellular communications network, from a current base station to one of a number of candidate base stations within said network, said method comprising the steps of:

generating a list of a plurality of candidate channels for possible acceptance of said communication handoff (Col.7, lines 57-58); transmitting a first measurement order from said current base station to said mobile station, said first measurement order containing said list of candidate channels (Col. 7, lines 63-65);

measuring a received signal strength and a bit error rate at said mobile station for said communication between said mobile station and said current base station (Col. 6, lines 11-16); measuring received signal strength at said mobile station for each of said candidate channels listed in said first measurement order (Col. 7, lines 66 and Col. 8 line 1)

transmitting said received signal strength measurements from said mobile station to said current base station (Col. 8 line 1), selecting a plurality of most favorable candidate channels from said received signal strength measurement results (Col. 8, lines 3-8);

transmitting a second measurement order from said current base station to said mobile station, said second measurement order containing a list of said most favorable candidate channels (Col. 8, lines 30-34)

However, Wallstedt fails to disclose the remaining limitations of claim 1, namely: the step of tuning and synchronizing the mobile station to each of the candidate channels the second list, correlating said data from said candidate channel, reading and decoding an identification code for each of said candidate channels, and correlating said received signal strength measurements with said identification codes to identify an optimal candidate base station.

In an analogous art, **Haartsen** discloses the step of tuning and synchronizing said mobile station to each of said candidate channels (Col. 4, lines 7-12) listed in said second measurement order. Wallstedt implicitly teaches the step of tuning and synchronizing including: tuning into said candidate channel, reading data within time window on said candidate channel and returning back to said current base station channel since Wallstedt invention is based on

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IS-136 (Wallstedt, Col. 7, lines 22-24), the measurements of the candidate base stations are done when the mobile station within a time window of being idle (Col. 1, lines 45-49). Afterward, the mobile station waits for its time slot to come to begin transmitting to the current base station. Therefore, the mobile station performs the tuning and synchronizing within a time window and returning back to the current base station.

Haartsen implicitly teaches the step of correlating said data from said candidate channel with a plurality of known synchronization words and identifying a most probable synchronization word within said data since each base station has its own unique synchronization word and each mobile station knows the synchronization word for the base station that it is roaming in, it is inherent that the mobile station must correlate with a plurality of synchronization words to find out which one is the most probable synchronization word in order to synchronize with the neighbor cells. Furthermore, Haartsen teaches the step of reading and decoding an identification code for each of said candidate channels (Col. 4, lines 12-20 or Col. 15 lines 13-24), said step of reading and decoding including: transmitting said identification codes for each of said candidate channels from said mobile station to said current base station channels (Col. 4, lines 15-20 or Col. 5 lines 13-24); and correlating said received signal strength measurements with said identification codes to identify an optimal candidate base station for effecting said handoff of said communication (Col. 4, lines 20-23 or Col. 15 lines 13-24). Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention was made to add the steps of tuning and synchronizing the mobile station to each of the candidate channels in the second list, reading and decoding an identification code for each of the candidate channels, transmitting the identification codes for each of the candidate channels from mobile station to the current base station, and correlating the received signal strength measurements with the identification codes to identify an optimal candidate base

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station for effecting handoff. Synchronizing and decoding the identification code of the candidate base station will reduce the number of drop calls since the identification codes identify the source of the signals represented by the MAHO reports.

8. Regarding **claim 3**, Wallstedt and Haartsen teach all the limitations in claim 1 (see claim 1 above). Haartsen further implicitly teach the step of reading and decoding an identification code further comprises processing said data by searching for said identification code at a first predetermined number of symbols after the appearance of said probable synchronization word and, if said identification code cannot be found at said first predetermined number of symbols after said probable synchronization word, then searching for said identification code at a second predetermined number of symbols ahead of said probable synchronization word.

9. Regarding **claim 4**, Wallstedt and Haartsen teach all the limitations in claim 1 (see claim 1 above). Haartsen discloses the identification code known by displacement of the synchronization word (inherent). In IS-136, the identification code is known to be located within some distance away from the synchronization word. Therefore, if one knows the synchronization word, the identification code can be found.

10. Regarding **claim 5**, Wallstedt and Haartsen teach all the limitations in claim 1 (see claim 1 above). Wallstedt further teaches that said digital communication channels are formatted according to IS-136 standards for digital cellular radio communication and said candidate channel received signal strength measurements and said identification code readings are made by said mobile station during idle time slots within a frame (Col. 7, lines 22-24).

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11. Regarding **claim 6**, Wallstedt and Haartsen teach all the limitations in claim 1 (see claim 1 above). Haartsen further discloses that the identification code comprises a digital voice color code word in said candidate channel (Col. 4, lines 12-14).

12. Regarding **claim 7**, Wallstedt and Haartsen teach all the limitations in claim 1 (see claim 1 above). Wallstedt inherently teaches the step of monitoring threshold received signal strength values for said current channel and said candidate channels after said step of transmitting said received signal strength measurements from said mobile station to said current base station, said threshold values determining when selection and activation of said handoff should occur.

13. Claim **2, 8-15** rejected under 35 U.S.C. 103(a) as being unpatentable over **Wallstedt et al** (US Patent No. 5722073) in view of **Haartsen** (US Patent No. 5778075) in further view of **Ishi** (US Patent No. 5867786).

14. Regarding **claim 2**, Wallstedt and Haartsen teach all the limitations in claim 1 (see claim 1 above). However, they fail to explicitly teach that the step of reading and decoding an identification code further comprises storing said data from said candidate channel into a memory device located on said mobile station. In an analogous art, **Ishi** teaches the step of reading and decoding an identification code further comprises storing said data from said candidate channel into a memory device located on said mobile station (Col. 8 lines 46-51). Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention was made to combine Wallstedt, Haartsen, and Ishi's teachings to include a data processing device and a memory device locally for faster and easier processing.



15. Regarding **claim 8**, Walldstedt teaches an improved digital cellular communication system, the improvement comprising mobile station and base station elements for identifying candidate base stations for a communication handoff, making signal strength measurements on said candidate base stations, and selecting one of said candidate base stations to receive said communication handoff, said improved system comprising:

a current base station, said current base station being in communication on a current channel with a mobile station, said current base station having a memory for storing a first list of candidate base stations (312, Figure 3), said candidate base stations being those base stations proximate to said current base station and to which said communication handoff could occur (Figure 1 and 2);

a plurality of candidate base stations transmitting on a plurality of candidate channels, said transmissions containing synchronization and identification data (Col. 5 lines 38-46);

a mobile station in communication with said current base station, said mobile station comprising: means for making received signal strength measurements on said current channel and on said candidate channels (Col. 6 line 66 through Col. 8 line 1);

However, **Walldstedt** fails to disclose the means for tuning, synchronizing, reading identification data on said candidate channels and means for correlating said received signal strength measurements with said identification data to identify an optimal candidate base station. In an analogous art, **Haartsen** discloses the steps for tuning to said candidate channels and returning to said current channel; means for synchronizing to said candidate channels (Col. 4 lines 7-12); means for correlating said received signal strength measurements with said identification data and identifying from said correlation an optimal candidate base station to receive said communication handoff (Col. 4 lines 14-23 or Col. 15 lines 13-24).

In an analogous art, **Ishi** discloses means for reading said identification data on said candidate channels (Col. 4 lines 12 – 20 or column 15 lines 13-24) including a data processing device and a memory device (25 and 26 in Figure 2) said data processing device for locating and decoding said identification data on said candidate channel and said memory device for storing said identification data (Col. 8, lines 46-51), said data processing device and said memory device located on said mobile station, said data processing device able to perform at least at a rate of a predetermined number of operations per measurement period (inherent) and said memory device having at least a predetermined number of bits of memory (inherent); Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify Wallstedt's mobile station to include the features taught by Haartsen and Ishi. One of ordinary skill in the art would have been motivated to make this modification so that the identification of candidate base stations measured by the mobile station will be correlated with the appropriate measurements, thus achieving successful handoffs (see Col. 15 lines 13-24 of Haartsen).

16. Regarding **claim 9**, Wallstedt, Haartsen and Ishi teach all the limitations in claim 8 (see claim 8 above). Wallstedt further teaches that wherein said digital communication channels are formatted according to IS-136 standards for digital cellular radio communication (Col. 7, lines 22-24).

17. Regarding **claim 10**, Wallstedt, Haartsen and Ishi teach all the limitations in claim 8 (see claim 8 above). Ishi further teaches that the said means for synchronizing to said candidate channels comprises a data processing device and a memory device (25 and 26 Figure 2), said data processing device for correlating data on said candidate channel with known

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synchronization data and said memory device for storing said correlation and synchronization data, said data processing device and said memory device located on said mobile station (Col. 8 lines 46-51). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify the teachings of Wallstedt, Haartsen, and Ishi to include a data processing device and memory device having the functions taught by Ishi to process the data more easily without having to waste the radio resources from the network to retrieve the data thus allows faster processing of the data (see Col. 9, lines 39 -54).

18. Regarding **claim 11**, Wallstedt, Haartsen and Ishi teach all the limitations in claim 8 (see claim 8 above). Haartsen further teaches that said means for correlating said received signal strength measurements with said identification data comprises a data processing device, said data processing device located at said current base station (*Col. 4, lines 20 -23 or Col. 15 lines 13-24*).

19. Regarding **claim 12**, the limitations of claim 12 are the same as those of claim 8 except for a slight minor reordering of the claims, which means the limitations are similar to those claim 8. Therefore, claim 12 is rejected for the same reasons as claims 8.

20. Regarding **claim 13**, the limitations of claim 13 are the same as those of claim 9. Therefore, they are rejected for the same reasons as claims 9.

21. Regarding **claim 14**, Wallstedt, Haartsen and Ishi teach all the limitations in claim 8 (see claim 8 above). Ishi further discloses means for reading said identification data on said candidate channels (Col. 4 lines 12 – 20 or column 15 lines 13-24) including a data processing

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device and a memory device (25 and 26 in Figure 2), said data processing device for locating and decoding said identification data on said candidate channel and said memory device for storing said identification data (Col. 8, lines 46-51), said data processing device and said memory device located on said mobile station (inherent).

22. Regarding **claim 15**, the limitations of claim 15 are the same as those of claim 11.

Therefore, they are rejected for the same reasons as claim 11.

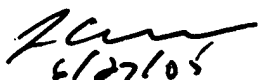
### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dung Lam whose telephone number is (571) 272-6497. The examiner can normally be reached on M-F 8 - 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lester Kincaid can be reached on (571) 272-7922. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

DL  
6/27/2005

  
6/27/05  
LESTER G. KINCAID  
PRIMARY EXAMINER